

REMARKS

The claims remaining in the present application are Claims 1-27. Claims 1, 14 and 21 are amended herein. No new matter has been added.

REJECTIONS

35 U.S.C. §103

Claims 1-3, 6, 9-11, 14, 21, 22 and 27 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,748,689 by Lee et al. (referred to hereinafter as "Lee") in view of Ratnakar (6,928,186). Applicants respectfully submit that embodiments of the present invention are neither taught nor suggested by Lee, alone or in combination with Ratnakar. The rejection is respectfully traversed for the following rational.

Claim 1 recites,

A method of performing region-of-interest editing of a video stream in the compressed domain, said method comprising:
receiving a video stream frame comprising an unwanted portion and a region-of-interest portion;
compressing said video stream frame to obtain a compressed video stream frame; and
editing said compressed video stream frame to modify said unwanted portion and obtain a compressed video stream frame comprising said region-of-interest portion while maintaining an original structure of said video stream.

Lee does not teach or suggest, among other things, "...a region-of-interest portion...editing...to modify said unwanted portion... while maintaining an original structure of said video stream" as recited by Claim 1.

Lee states in the abstract, "...encoder or decoder uses shape information that describes the boundary of a group of pixels representing an object in a sequence of video frames to identify transparent blocks..." Col. 3 lines 1-4 state, "An object is a group of pixels in a video frame used to display something that behaves as a physical entity. In particular, this entity preferably demonstrates relatively rigid body motion and color invariance..." Col. 3 lines 19-22 state, "An encoder employing this method evaluates the shape of an object to determine whether a given block is transparent, i.e., covered by the object." The abstract also states, "The encoder and decoder use this shape information to identify transparent macroblocks or blocks so that texture coding and possible motion coding can be skipped." Therefore, Lee teaches skipping texture coding and possibly motion coding for transparent blocks.

In contrast, Claim 1 recites “a region-of-interest portion.” No where does Lee teach “a region-of-interest portion.” Lee’s object cannot be “a region-of-interest portion” since Lee is using his object to determine transparent blocks that certain types of processing, such as texture coding and motion coding, can be skipped for.

Further, Claim 1 recites “editing...to modify said unwanted portion,” (emphasis added). Instead Lee teaches skipping certain types of processing, such as texture coding and motion coding.

Applicant respectfully asserts that the combination of Lee et al. in view of Ratnakar does not satisfy the requirements of a *prima facie* case of obviousness. In order to establish a *prima facie* case of obviousness, the prior art must suggest the desirability of the claimed invention (MPEP 2142). In particular, “if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious” (emphasis added) (MPEP 2143.01; *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959)).

Specifically, Applicant does not understand Lee et al. to teach or render obvious , “...a region-of-interest portion...editing...to modify said unwanted portion...”. Moreover, Applicant does not understand Lee et al. to teach editing...to modify said unwanted portion.” Instead, Applicant understands Lee teaching skipping certain types of processing, such as texture coding and motion coding.

Therefore, the Examiner’s proposed modification to add a region of interest editor to Lee et al. would fundamentally change the operation of Lee because Lee expressly teaches that this could be skipped. Skipping modification of the unwanted portion directly teaches away from embodiments of the present invention and directly teaches away from the proposed modification suggested by the Examiner.

“[i]f the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed amendment” (emphasis added) (MPEP 2143.01; *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)).

Thus, Applicant respectfully submits that Lee teaches directly away from a portion of interest editor. Therefore, the proposed modification as suggested by the present Office Action would render the prior art invention being modified unsatisfactory for its intended purpose (emphasis added).

Furthermore, neither Lee nor Ratnaker teaches the feature “while maintaining an original structure of said video stream,” as claimed. In fact, Ratnaker actually teaches away from this claimed feature by teaching reducing a source image “using a combination of downscaling, cropping....” Cropping and downscaling would change the original structure of the video stream, which teaches away from maintaining the original structure, as claimed.

For the foregoing reasons, independent Claim 1 should be patentable. Independent Claims 14 and 21 should be patentable for similar reasons that Claim 1 should be patentable. As such, Applicants respectfully submit that Claims 1-3, 6, 9-11, 14, 21, 22 and 27 are patentable over Lee in view of Ratnakar and respectfully request the rejection be removed.

Claims 4, 5, 13, 15, 16, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee modified by Ratnakar in further view of Hurst (6,959,045). The rejection is respectfully traversed for the following rational.

As stated above, Applicant submits that Lee teaches directly away from a portion of interest editor, as claimed. Therefore, the proposed modification of Lee with Ratnaker, as suggested by the present Office Action, would render the prior art invention being modified unsatisfactory for its intended purpose (emphasis added).

Applicants submit that Modifying Lee with Ratnakar, in addition to Hurst also would render the prior art invention being modified unsatisfactory for its intended purpose (emphasis added).

Specifically, Lee teaches directly away from a portion of interest editor. Lee teaches skipping Therefore, the proposed modification as suggested by the present Office Action would render the prior art invention being modified unsatisfactory for its intended purpose (emphasis added).

Furthermore, neither Lee nor Ratnaker nor Hurst teaches the feature “while maintaining an original structure of said video stream,” as claimed. As stated above, Ratnaker actually teaches away from this claimed feature by teaching reducing a source image “using a combination of downscaling, cropping....” Cropping and downscaling would change the original structure of the video stream, which teaches away from maintaining the original structure, as claimed.

Hurst also teaches away from “maintaining the original structure of the video stream” by teaching “decoding variable length encoded digital video data including pictures to a size less than the full size of the pictures” (abstract). Similar to Ratnaker, Hurst modifies the structure of the video stream, which teaches away from maintaining the original structure, as claimed.

For this rational, the combination of Lee, Ratnaker and Hurst fails to teach or suggest the features of Claims 4, 5, 13, 15, 16, 23 and 24. As such, Applicants request the rejection be removed.

Claims 7, 8, 17, 18, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee modified by Ratnaker in further view of Maki (6,072,903). The rejection is respectfully traversed for the following rational.

As stated above, neither Lee nor Ratnaker teaches the feature “while maintaining an original structure of said video stream,” as claimed. In fact, Ratnaker actually teaches away from this claimed feature by teaching reducing a source image “using a combination of downscaling, cropping....” Cropping and downscaling would change the original structure of the video stream, which teaches away from maintaining the original structure, as claimed.

Maki fails to remedy the deficiencies of Lee and Ratnaker. Applicants understand Maki to teach modeling a target object in time-series images (abstract). However, with Maki, the modeling is not performed in the “compressed domain,” as with the present invention. For this rational, Maki fails to teach or suggest maintaining the original structure of a compresses video stream, as claimed.

For this rational, the combination of Lee, Ratnaker and Maki fails to teach or suggest the features of Claims 7, 8, 17, 18, 25, and 26. As such, Applicants request the rejection be removed.

Claims 12, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee modified by Ratnaker in further view of Wang (7,158,861). The rejection is respectfully traversed for the following rational.

As stated above, neither Lee nor Ratnaker teaches the feature “while maintaining an original structure of said video stream,” as claimed. In fact, Ratnaker actually teaches away from this claimed feature by teaching reducing a source image “using a combination of downscaling, cropping....” Cropping and downscaling would change the original structure of the video stream, which teaches away from maintaining the original structure, as claimed.

Wang fails to remedy the deficiencies of Lee and Ratnaker. Applicants understand Wang to teach a robotic system that allows a consultant to provide remote consultation services through a remotely controlled robot (abstract). However, as with Lee and Ratnaker, Wang fails to teach or suggest maintaining the original structure of a compressed video stream while editing said compressed video stream frame to modify said unwanted portion and obtain a compressed video stream frame, as claimed.

For this rational, the combination of Lee, Ratnaker and Wang fails to teach or suggest the features of Claims 12, 19 and 20. As such, Applicants request the rejection be removed.

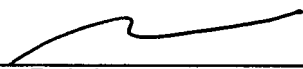
CONCLUSION

In light of the above listed amendments and remarks, reconsideration of the rejected claims is requested. Based on the arguments and amendments presented above, it is respectfully submitted that Claims 1-27 overcome the rejections of record. For reasons discussed herein, Applicant respectfully requests that Claims 1-27 be considered by the Examiner. Therefore, allowance of Claims 1-27 is respectfully solicited.

Should the Examiner have a question regarding the instant amendment and response, the Applicant invites the Examiner to contact the Applicant's undersigned representative at the below listed telephone number.

Respectfully submitted,
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